

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A line drawing image generating device for generating line drawing data based on original image data, comprising:

ink line area detecting mechanism for detecting an area whose brightness is smaller than a predetermined value in an original image, as an ink line area;

neighboring area detecting mechanism for detecting a neighboring area of the ink line area, which surrounds the ink line area;

outline area detecting mechanism for detecting an outline portion of an image as an outline area, with respect to an area other than the ink line area and the neighboring area in the original image, by performing an outline extraction process for the entire area of the original image except the ink line area and the neighboring area thereof;

line drawing data storing mechanism for storing the line drawing data; and

color data writing mechanism for writing color data to a storage area of the line drawing data storing mechanism, which corresponds to the ink line area and the outline area, and writing different color data to another storage area of the line drawing data storing mechanism, which corresponds to an area other than the ink line area and the outline area.

2. (previously presented) The line drawing image generating

device according to claim 1, wherein

the original image contains a plurality of pixels, and

when the ink line area is included in a predetermined area surrounding a pixel to be processed in the original image, and the pixel to be processed is not included in the ink line area, the neighboring area detecting mechanism detects the pixel to be processed as the neighboring area.

3. (previously presented) The line drawing image generating device according to claim 1, wherein the ink line area detecting mechanism detects, as the ink line area, a portion of an area where brightness is smaller than a predetermined value, such that the portion lies near the outline of the area.

4. (previously presented) The line drawing image generating device according to claim 3, wherein

the original image contains a plurality of pixels, and

when an area other than the ink line area is included in a predetermined area surrounding a pixel to be processed included in an area whose brightness is smaller than a predetermined value, the ink line area detecting mechanism detects the pixel to be processed as the ink line area.

5. (previously presented) The line drawing image generating device according to claim 1, further comprising still image data extracting

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mechanism for extracting arbitrary still image data from moving image data,

wherein

the line drawing data is generated using the still image data, which is extracted by the still image data extracting mechanism, as the original image data.

6. (currently amended) A computer readable storage medium storing a line drawing image generating program for generating line drawing data based on original image data, wherein the line drawing image generating program causes a computer to execute steps of:

detecting an area whose brightness is smaller than a predetermined value in an original image as an ink line area;

detecting a neighboring area of the ink line area, which surrounds the ink line area;

detecting an outline portion of an image as an outline area with respect to an area other than the ink line area and the neighboring area in the original image by performing an outline extraction process for the entire area of the original image except the ink line area and the neighboring area thereof; and

writing color data to a storage area of a line drawing data storing memory for storing the line drawing data, which corresponds to the ink line area and the outline area, and writing different color data to another storage area of the line drawing data storing memory, which corresponds to an area other than the ink line area and the outline area.

7. (previously presented) The storage medium according to claim 6, wherein the original image contains a plurality of pixels, and when the ink line area is included in a predetermined area surrounding a pixel to be processed in the original image and the pixel to be processed is not included in the ink line area, the line drawing image generating program causes the computer to detect the pixel to be processed as the neighboring area in the step of detecting the neighboring area.

8. (previously presented) The storage medium according to claim 6, wherein the step of detecting the ink line area, detects, as the ink line area, a portion of an area where brightness is smaller than a predetermined value, such that the portion lies near the outline of the area.

9. (previously presented) The storage medium according to claim 8, wherein the original image contains a plurality of pixels, and when an area other than the ink line area is included in a predetermined area surrounding a pixel to be processed included in an area whose brightness is smaller than a predetermined value, the line drawing image generating program causes the computer to detect the pixel to be processed as the ink line area in the step of detecting the ink line area.

10. (previously presented) The storage medium according to claim 6 wherein the line drawing image generating program further causes the computer

to execute a still image data extracting step of extracting arbitrary still image data from moving image data, and

the line drawing image generating program causes the computer to generate the line drawing data using the still image data, which is extracted by the still image data extracting step, as the original image data.

11. (currently amended) A line drawing image generating method for generating line drawing data based on original image data, the method comprising:

detecting an area whose brightness is smaller than a predetermined value in an original image, as an ink line area;

detecting a neighboring area of the ink line area, which surrounds the ink line area;

detecting an outline portion of an image as an outline area with respect to an area other than the ink line area and the neighboring area in the original image by performing an outline extraction process for the entire area of the original image except the ink line area and the neighboring area thereof; and

writing color data to a storage area of a line drawing data storing memory for storing the line drawing data, which corresponds to the ink line area and the outline area, and writing different color data to another storage area of the line drawing data storing memory, which corresponds to an area other than the ink line area and the outline area.

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12. (currently amended) A computer readable storage medium storing a line drawing image generating program for generating line drawing data based on an original image, wherein the line drawing image generating program causes a computer to execute:

detecting an ink line area of the original image, the ink line area having a brightness which is smaller than a predetermined value;

detecting a neighboring area of the original image, the neighboring area neighboring the ink line area;

detecting an outline area of the original image, the outline area being outside of the ink line area and the neighboring area and having a brightness which differs from an area adjacent to the outline area, by performing an outline extraction process for the entire area of the original image except the ink line area and the neighboring area thereof;

assigning data corresponding to a first color to both the ink line area and the outline area; and

assigning data corresponding to a second color, different than the first color, to at least the neighboring area.

13. (previously presented) The storage medium of claim 12, wherein the program further causes the computer to re-assign data of an interior portion of the ink line area so that the data of the interior portion of the ink line area corresponds to the second color rather than the first color.

14. (previously presented) The storage medium of claim 12, wherein the program further causes the computer to obtain the original image by extracting a still image from a moving image.

15. (previously presented) The storage medium of claim 12, wherein in addition to the neighboring area, all other areas of the original image outside of the ink line area and the outline area are assigned data corresponding to the second color.

16. (currently amended) A method of generating line drawing data based on original image data, the method comprising:

detecting pixels of an ink line area of the original image data, the ink line area pixels having respective brightnesses which are smaller than a predetermined value;

detecting pixels of a neighboring area of the original image data, the neighboring area pixels neighboring the ink line area pixels;

detecting pixels of an outline area of the original image data, the outline area being outside of the ink line area and the neighboring area by performing an outline extraction process for the entire area represented by the original image data except the ink line area and the neighboring area thereof, and the outline area pixels having respective brightnesses which differ from pixels adjacent to the outline area pixels;

assigning data corresponding to a first color to both the ink line area pixels and the outline area pixels; and

assigning data corresponding to a second color, different than the first color, to at least the neighboring area pixels.

17. (previously presented) The method of claim 16, wherein the method further comprising re-assigning data of an interior portion of the ink line area so that the data assigned to the pixels of the interior portion of the ink line area corresponds to the second color rather than the first color.

18. (previously presented) The method of claim 16, wherein the method further comprises obtaining the original image data by extracting still image data from moving image data.

19. (previously presented) The method claim 16, wherein in addition to the neighboring area pixels, all other pixels of the original image data outside of the ink area and the outline area are assigned data corresponding to the second color.

20. (new) A line drawing image generating device for generating line drawing data based on original image data, comprising:

a mechanism for detecting an area whose brightness is smaller than a predetermined value in an original image, as an ink line area, and generating ink line image data representing the ink line area;

a mechanism for consecutively selecting each pixel of entire original image data as a pixel to be processed;

a first determination mechanism for determining whether or not the pixel to be processed is included in the ink line area with reference to the ink line image data;

a second determination mechanism for determining whether or not the pixel to be processed is in a vicinity of the ink line area with reference to the ink line image data;

a third determination mechanism for determining whether or not the pixel to be processed is included in an outline by applying an outline extraction process to the pixel to be processed based on the original image data when the first determination mechanism determines that the pixel to be processed is included in the ink line area and the second determination mechanism determines that the pixel to be processed is in the vicinity of the ink line area; and

a mechanism for assigning, to a first color, pixels which are determined as being included in the ink line area by the first determination mechanism, and pixels which are determined as being included in the outline by the third determination mechanism, and assigning, to a second color other than the first color, pixels which are determined as being in the vicinity of the ink line area by

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the second determination mechanism, and pixels which are determined as being not included in the outline by the third determination mechanism, thereby generating line drawing data.